WHAT IS CLAIMED IS:

 A printing device having a plurality of print heads for the image-wise formation of dots of a marking substance on an image-receiving member, comprising:

a heat exchange device for bringing the temperature of each of said plurality of print heads to a predetermined set-point temperature value, and

an adjustment device for adjusting the temperature of one or more of said plurality of print heads from its predetermined set-point temperature value to an associated target set-point temperature value, wherein

each of said associated target set-point temperature values is determined in relation to a target value of an output parameter of said print heads, said target value of said output parameter being determined on the basis of the respective values of said output parameter for the respective print heads, said respective values being obtained by operating each of said respective print heads at said predetermined set-point temperature value to render a predetermined test pattern, where said target value of said output parameter is determined such that for each of the print heads the absolute value of the difference between the associated target set-point temperature value and the predetermined set-point temperature value with which the temperature of each print head is to be adjusted is 15% or less of said predetermined set-point temperature value.

- The printing device as recited in claim 1, wherein said absolute value with which the temperature of each print head is to be adjusted is 10% or less of said predetermined set-point temperature value.
- 3. The printing device as recited in claim 1, wherein said target value of said output parameter is obtained by averaging said respective values of said output parameter for the respective print heads.
- 4. The printing device as recited in claim 1, wherein the target value of said output parameter is obtained by selecting the median value of said respective values of said output parameter for the respective print heads.
- The printing device as recited in claim 1, comprising at least two print heads for the image-wise formation of dots of marking substance of the same color.
- The printing device as recited in claim 5, wherein said at least two print heads are positioned on a print carriage in a staggered configuration with respect to said scanning direction.

- 7. The printing device as recited in claim 1, comprising a first plurality of print heads for the image-wise formation of dots of a first color and a second plurality of print heads for the image-wise formation of dots of a second color different from said first color, said first plurality of print heads having a corresponding first predetermined set-point temperature value and a first target value of an output parameter, said second plurality of print heads having a corresponding second predetermined set-point temperature value, different from said first temperature value and a second target value of an output parameter.
- 8. A method for controlling a printing device having a plurality of print heads for the image-wise formation of dots of a marking substance on an image-receiving member, comprising the steps of:

bringing the temperature of each of said plurality of print heads to a predetermined set-point temperature value,

determining a target set-point temperature value for one or more of said plurality of print heads, and

adjusting the temperature of one or more of said plurality of print heads from its predetermined set-point temperature value to its associated target set-point temperature value, wherein each of said target set-point temperature values is determined in relation to a target value of an output parameter of said print heads, said target value of said output parameter being determined on the basis of the respective values of said output

22

parameter for the respective print heads, said respective values being obtained by operating each of said respective print heads at said predetermined set-point temperature value to render the same image, where said target value of said output parameter is determined such that for each of the print heads the absolute value of the difference between said associated target set-point temperature value and said predetermined set-point temperature value with which the temperature of each print head is to be adjusted is 15% or less of said predetermined set-point temperature value.

- 9. The method as recited in claim 8, wherein said target value of said output parameter is obtained by averaging said respective values of said output parameter for the respective print heads.
- 10. The method as recited in claim 9, wherein a target set-point temperature value for each of said plurality of print heads is determined, and the temperature of each of said plurality of print heads is adjusted from its predetermined set-point temperature value to its associated target setpoint temperature value.